

U.S. Appln. No. 09/524,358
Reply to Office Action dated January 2, 2008

PATENT
450100-02402

IN THE DRAWINGS

Attached are Replacement Sheets for Figures 3, 17 and 30 to correct typographical errors.

REMARKS

This Amendment responds to the Office Action dated January 2, 2008, in which the Examiner rejected claims 1-6 and 8-17 under 35 U.S.C. § 103.

Attached to this Amendment are Replacement Sheets for Figures 3, 17 and 30 in order to correct typographical errors in the Drawings. Applicants respectfully request the Examiner approves the corrections.

Claim 1 claims an audio/video data processing apparatus, claim 8 claims a data processing system including a storage apparatus and an audio/video data processing apparatus, and claim 13 claims an audio/video data processing method. The audio/video data processing apparatus, data processing system and audio/video data processing method include compressing audio/video data in units of compression blocks having a first data length. The compressed data are encrypted in units of an encryption block having a second data length smaller than the unit of the compression block having the first data length. The first data length is a data length of an integer multiple, greater than one, of the second data length. The encrypted data is stored so that data positioned in a same encryption block is also positioned in a same compression block. The data is read from the storage means in units of the compression block. Claim 8 recites additional features for mutual identification between the storage apparatus and the audio/visual data processing apparatus.

By (a) compressing data in units of a compression block having a first data length, (b) encrypting the compressed data in units of an encryption block having a second data length smaller than the unit of the compression block having the first data length, and (c) having the compression block data length be an integer multiple, greater than one, of the encryption block data length, as claimed in claims 1, 8 and 13, the claimed invention provides an audio/video data

processing apparatus and method in which the processing load to access data is reduced since there are no breaks between encryption blocks. The prior art does not show, teach or suggest the invention as claimed in claims 1, 8 and 13.

Claim 19 claims an audio/video data processing apparatus, claim 20 claims a data processing system and claim 21 claims an audio/video data processing method. The audio/video data processing apparatus, data processing system and audio/video data processing method include compressing audio/video data in units of a compression block having a first data length, where the first data length is a data length which is able to replay the audio/video data. The compressed data are encrypted in units of an encryption block having a second data length. The first data length is a data length of an integer multiple, greater than one, of the second data length. The encrypted data is stored so that data position in a same encryption block is positioned in a same compression block. The data is read from the storage means in units of the compression block. Claim 20 recites additional features for mutual identification between the storage apparatus and the audio/visual data processing apparatus.

By (a) compressing data in units of a compression block having a first data length which is able to replay audio/video data, (b) encrypting the compressed data in units of an encryption block having a second data length and (c) having the compression block data length be an integer multiple, greater than one, of the encryption block data length, as claimed in claims 19-21, the claimed invention provides an audio/video data processing apparatus and method in which the processing load to access data is reduced since there are no breaks between encryption blocks. The prior art does not show, teach or suggest the invention as claimed in claims 19-21.

Claims 1, 3-4, 6, 13, 15-16 and 21 were rejected under 35 U.S.C. § 103 as being unpatentable over *Yoshiura et al.* (U.S. Patent No. 6,157,720) in view of *Keith* (U.S. Patent No. 5,615,020).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

Yoshiura et al. appears to disclose determining if the amount of compressed data is greater than or equal to a block size at step 205. If a block size is reached, the block of the compressed data is encrypted at step 206. (Col. 4, lines 42-49).

Thus, *Yoshiura et al.* merely discloses compressing data until it fills a block size and then encrypting the compressed data. Nothing in *Yoshiura et al.* shows, teaches or suggests that (a) the data length of encryption block is smaller than the data length of the compression block as claimed in claims 1 and 13, (b) the first data length is able to replay audio/visual data as claimed in claim 21 or (c) the first data length is a data length of an integer multiple, greater than one, of the second data length (i.e. the compression block data length is an integer multiple, greater than one, of the encryption block data length) as claimed in claims 1, 13 and 21. Rather, *Yoshiura et al.* only discloses compressing data into a block size and encryption of the compressed data block.

Keith appears to disclose Huffman encoding to achieve a compression factor of between 1 and 1 ½-2 times (Col. 1 lines 22-25, emphasis added).

Thus, *Keith* only discloses a compression factor for compressing data. Nothing in *Keith* shows, teaches or suggests that (a) the data length of encryption block is smaller than the data

length of the compression block as claimed in claims 1 and 13, (b) the first data length is able to replay audio/visual data as claimed in claim 21 or (c) a data length of compression is an integer multiple, greater than one, of an encryption data length as claimed in claims 1, 13 and 21.

Applicants respectfully submit that the Examiner is confusing encryption and compression/encoding. Attached to this Amendment are two excerpts from the Internet explaining the difference between compression/encoding and encryption. Since *Keith* only discloses a compression factor, nothing in *Keith* shows, teaches or suggests how the compression factor is related to the encryption and the length of the encryption block as claimed in claims 1, 13 and 21.

The combination of *Yoshiura et al.* and *Keith* would merely suggest that when the data is compressed to fit the block size in *Yoshiura et al.*, a compression factor of *Keith* is used. Thus, nothing in the combination of the references shows, teaches or suggests (a) the data length of encryption block is smaller than the data length of the compression block as claimed in claims 1 and 13, (b) the first data length is able to replay audio/visual data as claimed in claim 21 or (c) a relationship between the encryption block data length and the compression block data length as claimed in claims 1, 13 and 21. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 1, 13 and 21 under 35 U.S.C. § 103.

Claims 3-4, 6, and 15-16 recite additional features. Applicants respectfully submit that claims 3-4, 6 and 15-16 would not have been obvious within the meaning of 35 U.S.C. § 103 over *Yoshiura et al.* and *Keith* at least for the reasons as set forth above. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 3-4, 6, and 15-16 under 35 U.S.C. § 103.

Claims 2 and 14 were rejected under 35 U.S.C. § 103 as being unpatentable over *Yoshiura et al.* and *Keith* and further in view of *Bellovin et al.* (U.S. Patent No. 5,241,599). Claims 5 and 17 were rejected under 35 U.S.C. § 103 as being unpatentable over *Yoshiura et al.* and *Keith* and further in view of *Yeunyongsgool et al.* (U.S. Patent No. 6,202,152).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in *Yoshiura et al.* and *Keith* show, teach or suggest the primary features as claimed in claims 1 and 13, Applicants respectfully submit that the combination of the primary references with the secondary references to *Bellovin et al.* or *Yeunyongsgool et al.* would not overcome the deficiencies of the primary references. Additionally, Applicants respectfully point out that *Yeunyongsgool et al.* is merely directed to increasing information transfers from an encryption memory. In particular, Col. 2, lines 35-45 of the *Yeunyongsgool et al.* merely discloses that when a current address and requested address are unequal, a new block of encryption information is fetched while if the current address and the requested address are equal, no fetch is needed. Thus, nothing in *Yeunyongsgool et al.* shows, teaches or suggests storing compression blocks at consecutive addresses in an order of encryption and storing encryption blocks in compression blocks at consecutive addresses in the order of encryption as claimed in claims 5 and 17. Rather, *Yeunyongsgool et al.* merely discloses fetching addresses if a current address and a requested address are unequal while not performing a fetch if the addresses are equal. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 2, 5, 14 and 17 under 35 U.S.C. § 103.

Claims 8, 10-11 and 19-20 were rejected under 35 U.S.C. § 103 as being unpatentable over *Yoshiura et al.* in view of *Keith* and further in view of *Bahout* (U.S. Patent No. 5,594,793).

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, *Yoshiura et al.* only discloses compressing data into a block size and encrypting the block. Nothing in *Yoshiura et al.* shows, teaches or suggests (a) the data length of encryption block is smaller than the data length of the compression block as claimed in claim 8, (b) the first data length is able to replay audio/visual data as claimed in claims 19-20 or (c) a compression block data length is an integer multiple, greater than one, of an encryption block having a second data length as claimed in claims 8 and 19-20.

Furthermore, as discussed above, *Keith* only discloses a Huffman encoding having a compression factor between 1 and 1 ½-2 times. Nothing in *Keith* shows, teaches or suggests (a) the data length of encryption block is smaller than the data length of the compression block as claimed in claim 8, (b) the first data length is able to replay audio/visual data as claimed in claims 19-20 or (c) a relationship between the data length of a compression block and the data length the encryption block as claimed in claims 8 and 19-20. As discussed above, encoding/compression is not the same as encryption (see attached references).

Bahout appears to disclose computing an encrypted password as a function of identification data element to verify compatibility between a manufacturer's password and a key contained in a memory (Col. 7, lines 10-16). Nothing in *Bahout* shows, teaches or suggests (a) the data length of encryption block is smaller than the data length of the compression block as

claimed in claim and 8, (b) the first data length is able to replay audio/visual data as claimed in claims 19-20 or (c) a compression block data length is an integer multiple, greater than one, of an encryption block data length as claimed in claims 8 and 19-20. Rather, *Bahout* only discloses computing an encrypted password as a function of an identification data element to verify compatibility between a manufacturer's password and a key contained in a memory.

A combination of *Yoshiura et al.*, *Keith* and *Bahout* would merely suggest that when data is compressed to fit the block size in *Yoshiura et al.*, the Huffman encoding is used as taught by *Keith* while computing an encrypted password as taught by *Bahout*. Thus, nothing in the combination of the references shows, teaches or suggests (a) the data length of encryption block is smaller than the data length of the compression block as claimed in claim 8, (b) the first data length is able to replay audio/visual data as claimed in claims 19-20 or (c) a compression block data length is an integer multiple, greater than one, of an encryption block data length as claimed in claims 8 and 19-21, Applicants respectfully request the Examiner withdraws the rejection to claim 8 and 19-20 under 35 U.S.C. § 103.

Claims 10-11 recite additional features. Applicants respectfully submit that claims 10-11 would not have been obvious within the meaning of 35 U.S.C. § 103 over *Yoshiura et al.*, *Keith* and *Bahout* at least for the reasons as set forth above. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 10-11 under 35 U.S.C. § 103.

Claim 9 was rejected under 35 U.S.C. § 103 as being unpatentable over *Yoshiura et al.*, *Keith*, and *Bahout* and further in view of *Bellovin et al.* Claim 12 was rejected under 35 U.S.C. § 103 as being unpatentable over *Yoshiura et al.*, *Keith* and *Bahout* and further in view of *Yeunyongsgool et al..*

Applicants respectfully traverse the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicants respectfully request the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in the combination of the primary references shows, teaches or suggests the primary features as claimed in claim 8, Applicants respectfully submit that the combination of the primary references with the secondary references to *Bellovin et al.* or *Yeunyongsgool et al.* will not overcome the deficiencies of the primary references. Additionally, as discussed above, *Yuenyongsgool et al.* does not show, teach or suggest storing compression blocks at consecutive addresses of a storage means in the order of encryption and storing the encryption blocks in the compression blocks at consecutive addresses in the order of encryption as claimed in claim 12. Therefore, Applicants respectfully request the Examiner withdraws the rejection to claims 9 and 12 under 35 U.S.C. § 103.

The prior art of record, which is not relied upon, is acknowledged. The references taken singularly or in combination do not anticipate or make obvious the claimed invention.

CONCLUSION

Thus it now appears that the application is in condition for reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested.

If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time. The fees for such extension of time may be charged to Deposit Account No. 50-0320.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 50-0320.

Respectfully submitted,

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